

# Three phase Off-grid Inverter



## X3-GENKI

10kW / 12kW / 15kW / 20kW



### Smart Management

- Dedicated load interface for intelligent load management
- Global MPP scan for optimal energy harvest



### Assured Reliability

- Battery terminal temperature detection
- IP65 protection degree
- Type II SPD on AC&DC side
- Optional AFCI protection\*



### High Performance

- 200% PV oversizing and up to 110% AC output
- 200% peak overload power for 10 s
- Max. 300A charging / discharging current
- Low start-up voltage for longer operation



### Flexible Adaptability

- Max. 10pcs parallel for off-grid\*
- Generator function for versatile operations
- Max. 36A DC input per MPPT, optimized for high-power solar panel

\* Feature to be upgraded in the future

| DC INPUT                                    |                                                   |             |             |             |
|---------------------------------------------|---------------------------------------------------|-------------|-------------|-------------|
| Max. PV array power                         | 20000 Wp                                          | 24000 Wp    | 30000 Wp    | 40000 Wp    |
| Max. PV input power (derating above +45°C)  | 20000 W                                           | 24000 W     | 30000 W     | 40000 W     |
| Max. PV input voltage                       | 1000 V                                            |             |             |             |
| Start-up voltage                            | 150 V                                             |             |             |             |
| Nominal input voltage                       | 640 V                                             |             |             |             |
| MPPT voltage range                          | 160-950                                           |             |             |             |
| No. of MPPT / strings per MPPT              | 2 (2 / 1)                                         | 2 (2 / 2)   | 2 (2 / 2)   | 2 (2 / 2)   |
| Max. input current                          | 36 A / 18 A                                       | 36 A / 36 A | 36 A / 36 A | 36 A / 36 A |
| Max. short circuit current                  | 50 A / 25 A                                       | 50 A / 50 A | 50 A / 50 A | 50 A / 50 A |
| BATTERY DATA                                |                                                   |             |             |             |
| Battery type                                | Lithium / Lead-Acid                               |             |             |             |
| Battery voltage range                       | 40 ~ 60 V                                         |             |             |             |
| Nominal battery voltage                     | 48 V                                              |             |             |             |
| Max. charging voltage                       | ≤60 V (Adjustable)                                |             |             |             |
| Max. charging/discharging current           | 250 A                                             | 280 A       | 300 A       | 350 A       |
| Charging strategy for Li-ion battery        | Self-adaption to BMS                              |             |             |             |
| Charging strategy for Lead-acid battery     | 3 stages curves                                   |             |             |             |
| Temperature sensor                          | Yes                                               |             |             |             |
| OUTPUT (WITH BATTERY)                       |                                                   |             |             |             |
| Nominal output power                        | 10000 W                                           | 12000 W     | 15000 W     | 20000 W     |
| Peak apparent power <sup>1</sup><br>sun+BAT | 2 times of rated power,10S                        |             |             |             |
| Nominal AC output frequency                 | 50 / 60 Hz                                        |             |             |             |
| Nominal AC output current                   | 14.50 A                                           | 17.40 A     | 21.70 A     | 29.00 A     |
| Nominal AC voltage                          | 220 / 380 , 230 / 400                             |             |             |             |
|                                             |                                                   |             |             |             |
| THDv(@linear load)                          | < 2 %                                             |             |             |             |
| SYSTEM DATA                                 |                                                   |             |             |             |
| MPPT efficiency                             | > 99.9%                                           |             |             |             |
| Max. efficiency                             | 97.6%                                             |             |             |             |
| Euro. efficiency                            | 97%                                               |             |             |             |
| PROTECTION DEVICE                           |                                                   |             |             |             |
| PV string input reverse polarity protection | Yes                                               |             |             |             |
| Insulation resistor detection               | Yes                                               |             |             |             |
| Residual current monitoring unit            | Yes                                               |             |             |             |
| Output over current protection              | Yes                                               |             |             |             |
| Output short protection                     | Yes                                               |             |             |             |
| Output over voltage protection              | Yes                                               |             |             |             |
| Surge protection                            | AC Type II/DC Type II                             |             |             |             |
| Battery terminal temp protection            | Yes                                               |             |             |             |
| ENVIRONMENT LIMIT                           |                                                   |             |             |             |
| Degree of protection                        | IP65                                              |             |             |             |
| Operating temperature range                 | -25℃ ~ +60℃ (derating above +45℃)                 |             |             |             |
| Relative humidity                           | 0-100% (condensing)                               |             |             |             |
| Max. operation altitude                     | <3000 m                                           |             |             |             |
| Storage temperature                         | -40~+70℃                                          |             |             |             |
| Noise emission (typical)                    | <55 dB                                            |             |             |             |
| GENERAL                                     |                                                   |             |             |             |
| Dimensions (WxHxD)                          | 520 × 705 × 258 mm                                |             |             |             |
| Net weight                                  | 44.6 kg                                           |             |             |             |
| Cooling concept                             | FAN                                               |             |             |             |
| Topology                                    | Transformerless for PV side / HF for battery side |             |             |             |
| HMI Interface                               | LED + LCD                                         |             |             |             |
| Communication interfaces                    | CAN/RS485/WiFi/LAN/4G (optional)/NTC              |             |             |             |
| Mounting                                    | Wall bracket                                      |             |             |             |
| STANDARD                                    |                                                   |             |             |             |
| Safetv                                      | EN IEC 62109-1/-2, EN IEC 61683                   |             |             |             |